

# DYNEGY

CHALLENGE

INNOVATION

PERFORMANCE

## *Deregulation at the Crossroads*

Learning From the California Experience

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## *Basics: What Did Happen?*

- ◆ **Supply/Demand imbalance**
- ◆ **Market structure flaws**
  - **Resort to spot/real-time markets for entire load**
  - **Price caps and other machinations**
- ◆ **Little new supply**
- ◆ **Growth and drought in West**



# *California Growth Statistics 1990-99*

## ◆ Economic and Demographic

- Employment: +12%
- Population: +16%
- State Economy: +45%
- Electronics and Instruments
- Industry: +62%
- Communications Industry: + 80%

## ◆ Energy

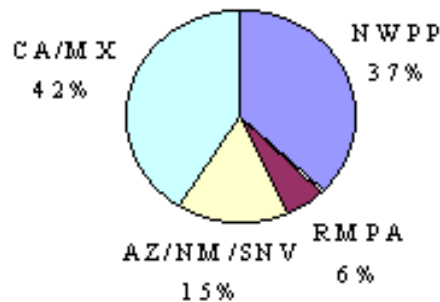
- Nat. Gas Use +6%
- Electricity Use +9%
- Peak Demand +15%
- Peak Demand in Silicon Valley +33%
- **Power Generation Capacity +2%**

- ◆ Economic data from 1990-1998 actual, with 1998-1999 extrapolated using 1997-1998 growth rate (Source: CA Department of Finance, Economic Research Unit)
- ◆ Electricity use from 1990-1999 (Source: CEC)
- ◆ Peak Demand from 1990-1999 (Source: CEC)
- ◆ Gas use from 1990-1997 actual (Source: EIA); 19; Silicon Valley Growth from Los Angeles Times, 1/8/00.97-1999 assumes average growth rate from 1990-1998
- ◆ Generation Capacity growth from 1990-2000 (Source: 1990: CEC Electricity Report and appendices; 2000: CEC Power database)

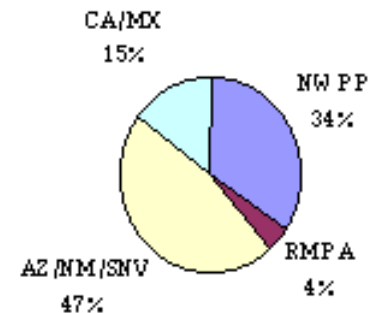


# *Imports to California Reduced By Growth in Rest of the West*

**WSCC 1999 Summer Peak  
= 129059 MW**



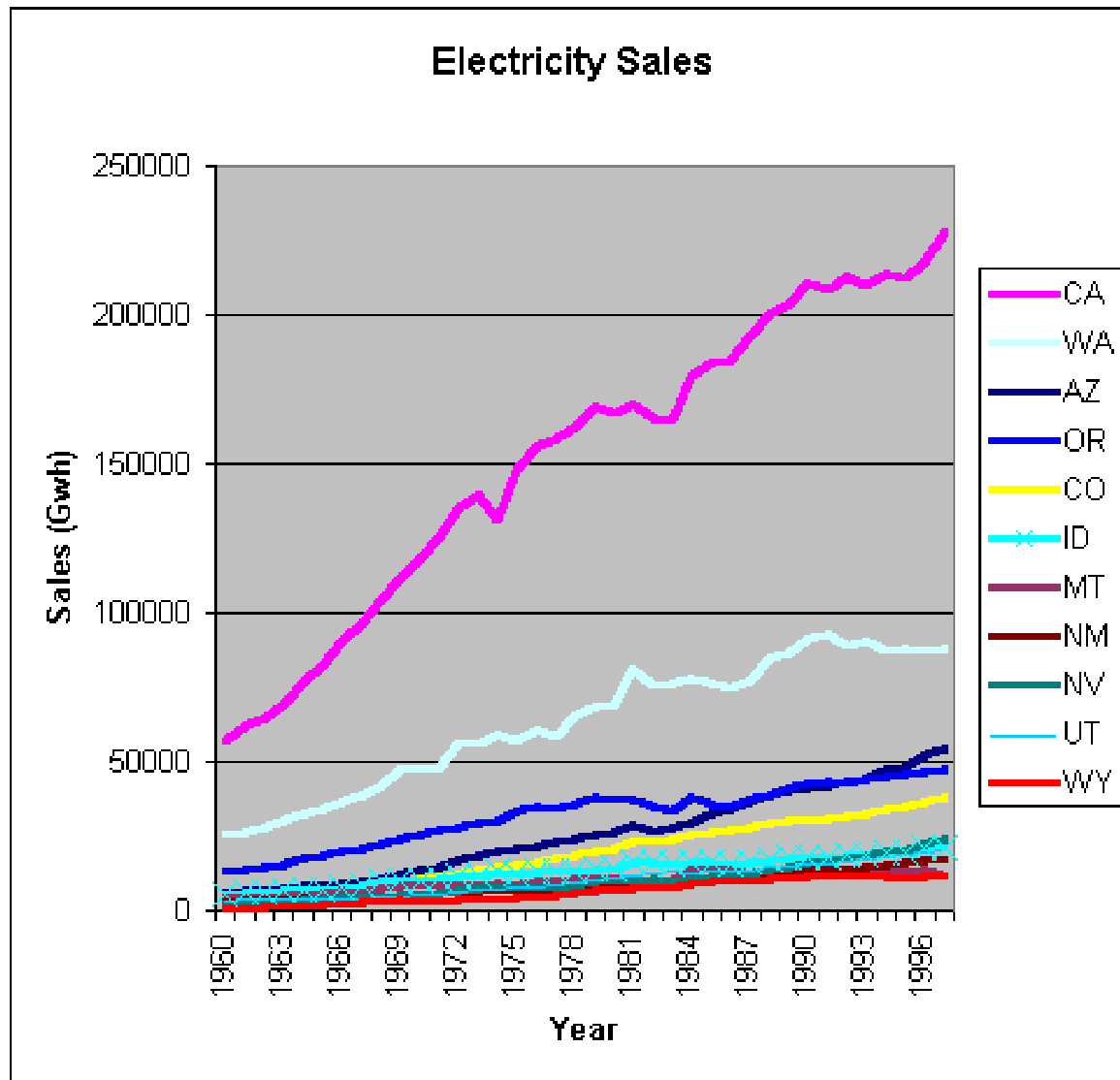
**1995-99 Shares of Summer Peak Growth**



(Source: Northwest Power Planning Council)



*Growth in  
Power  
Consumption  
in Western  
States (1960-  
2000)*

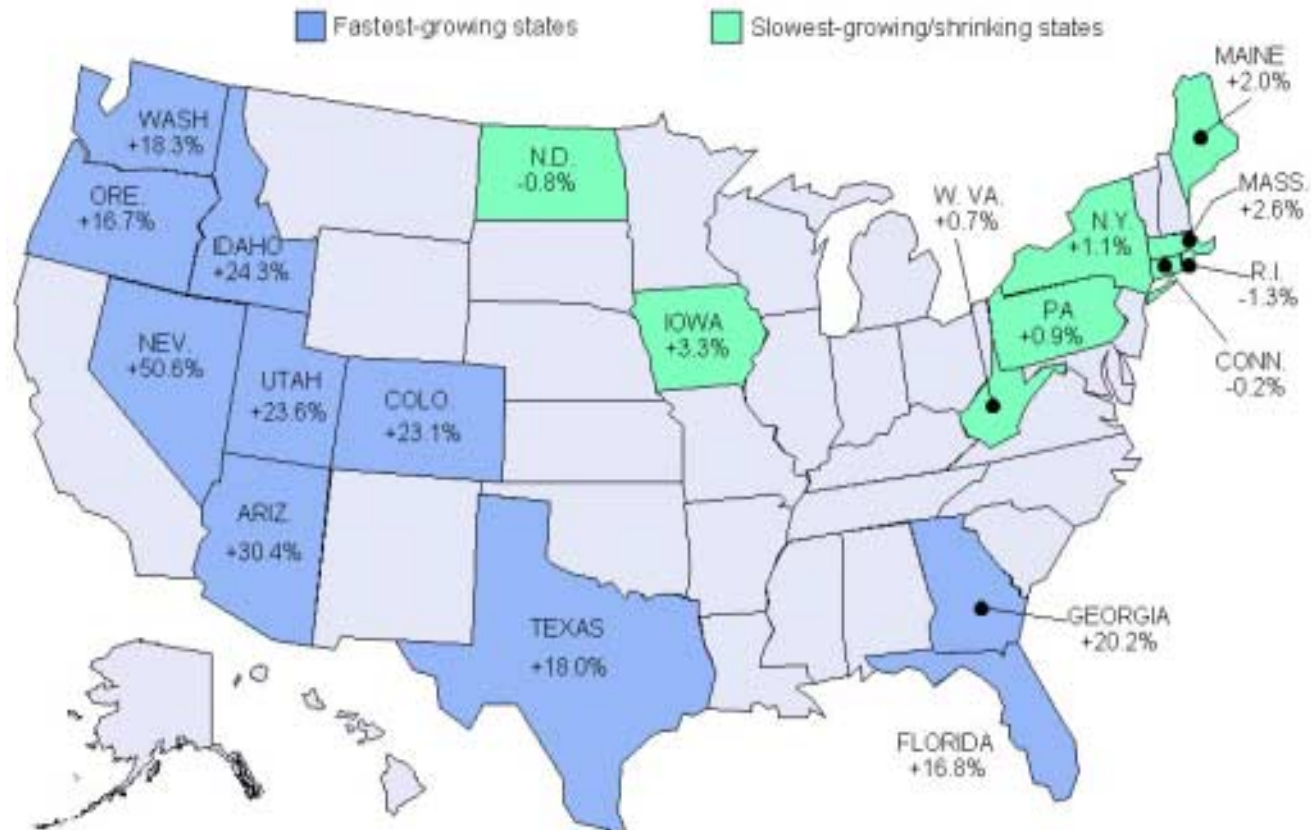


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# Population Growth

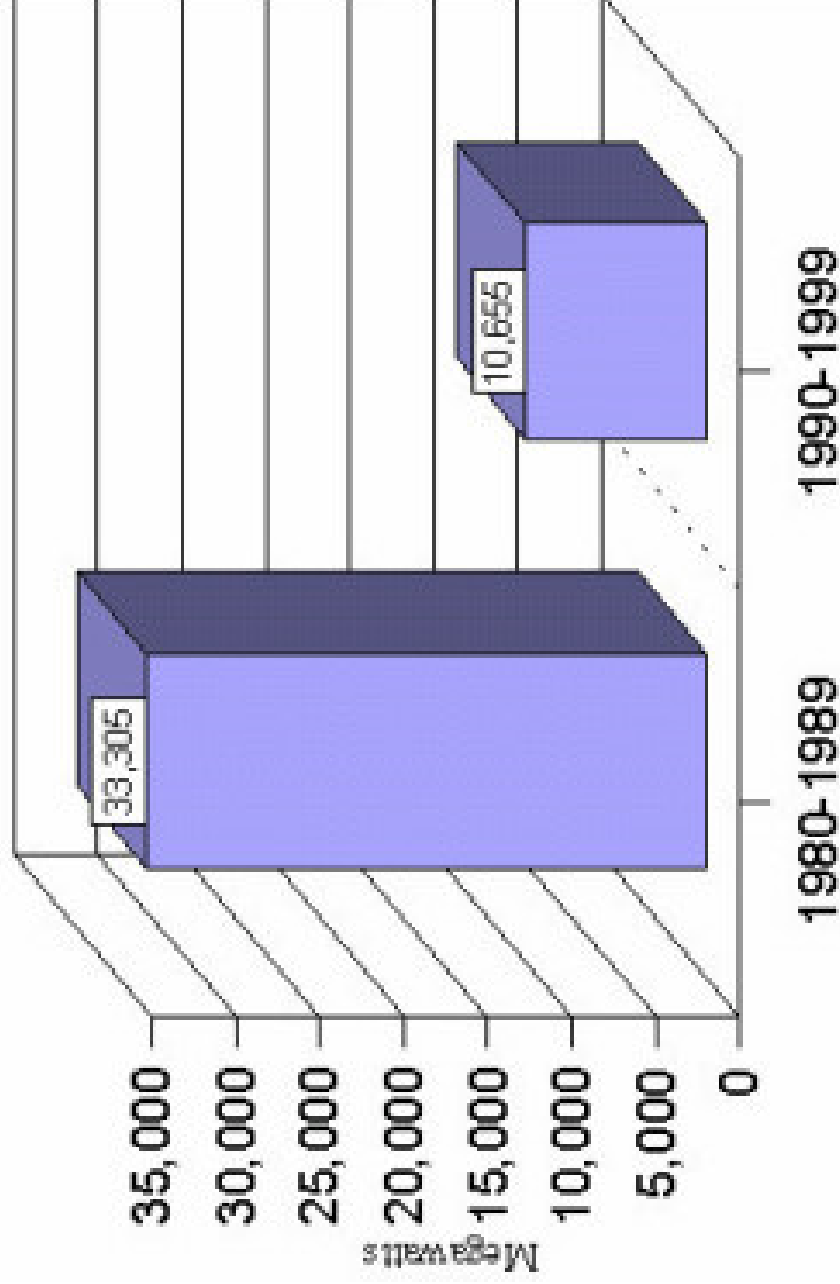
## A Country in Transition

Percentage changes in population from April 1, 1990 through July 1, 1999



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# Generation Additions in the Western Interconnection 1980-1999



*What Didn't Happen?*



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*Fiction: California rates have gone through the roof and it's deregulation's fault.*

◆ **Fact: Rates are high for other reasons, e.g., because**

- California's market is designed so that, until Jan. 1, demand purchased power at the last minute at the highest price that either the ISO or PX can find.
- Insufficient generation has been installed (only around 600 MW has been added during the last decade) while demand has increased by over 10,000 MW.
- California has traditionally relied heavily on imports from other Western states by California, and power usage in those states has grown, leaving less to export California – roughly 5,500 MW less this summer.
- Restructuring was instituted in California because the state had some of the highest electric rates in the country.



*Fiction: California rates have gone through the roof and it's deregulation's fault.*

◆ **Fact: California markets are not deregulated**

- Deregulation = prices no longer set by government
  - ◆ CA retail prices set by AB1890
- Deregulation = competitive retail market
  - ◆ 10% mandated rate reduction = little retail penetration
- Deregulation = many buyers and many sellers
  - ◆ Monopoly PX
  - ◆ IOUs generally prohibited from entering bilateral contracts
- Deregulation = prices set by market
  - ◆ Price caps
- Deregulation = deals negotiated in marketplace
  - ◆ CA ISO 37 amendments



## *Fiction: "Out-of-state" generators are picking the pockets of California's ratepayers*

### ◆ **Facts:**

- The Regulated utilities in California still own 53% of the generation in California and were, until Jan. 1 selling at those same prices.
- Spot market natural gas prices combined with spot market sales results in high risk and little reward when gas prices are high. Generators must rely on spot market gas prices and risk paying high imbalance charges.
- Out-of-State generators paid \$1.4 billion over book value for the plants they purchased, saving California ratepayers from having to pay that much in stranded costs for uneconomic investments made by California utilities – no price caps then!
- QF costs approved by CPUC were market based.



## *Allegation: Generators are Withholding Power to Drive up Prices*

### ◆ **Facts:**

- **FERC Staff found to the contrary based on audit of 60% of outages**
  - ◆ The audits disclosed that the outages occurred at generating plants that were 30 to 40 years old and which were operated more heavily in 2000 than in previous years.
  - ◆ Most of the generating facilities were out-of-service because of significant equipment failures, including tube or turbine seal leaks, turbine blade wear, valve failure, and pump or pump motor failures.
  - ◆ Staff did not discover any evidence suggesting that the audited companies were scheduling maintenance or incurring outages in an effort to influence prices or to obtain leverage in price negotiations with the ISO.



## *Allegation: Generators are Withholding Power to Drive up Prices*

### ◆ **Facts:**

- ◆ Rather, the audit indicates that the companies took whatever steps were necessary to bring the generating facilities back on-line as soon as possible by accelerating maintenance and incurring additional expenses.
- ◆ Also, the audit report observed a relationship between prices and outages that is consistent with prices being driven by demand, not the companies' maintenance practices.

**Source: Summary of Staff audit report appearing in “RESPONSE OF THE STAFF OF THE FEDERAL ENERGY REGULATORY COMMISSION TO QUESTIONS POSED AT DECEMBER 20, 2000 WESTERN GOVERNORS ASSOCIATION DENVER MEETING” presented February 2, 2001 to Western Governors Association Meeting.**



*Fact: California Market Worked Well Until Bad Hydro Year Came Along*

- ◆ **Prices averaged about 3.5 cents/ KWh**
- ◆ **IOUs collected \$17 billion in stranded costs**
- ◆ **Lost 5,500 MW of import capability in 2000**



## *What to Do?*

### ◆ **Short-term - TRIAGE**

- Get as much energy out of the real-time market as possible
- Raise consumer prices
  - ◆ **9% demand reduction when SDG&E raised prices = 4,000+ MW statewide**
- Revert to 2000 Emissions Limits
  - ◆ **= 600/750 MW availability (2-2.5 Million MWh) from Dynegy alone**
  - ◆ **Extrapolates to probably 3-4,000 MW**
- Fix financial uncertainty problem
- Consumer education



## *What to Do?*

### ◆ Long-term

- Infrastructure improvements
  - ◆ Gas delivery in SDG&E
  - ◆ Transmission – Path 15, network upgrades
  - ◆ Generation siting
- Retail choice – let consumers decide level of risk
- Wholesale market improvements
  - ◆ Region-wide RTO?
  - ◆ Seams issues





## *What to Do?*

- ◆ **Long-term (cont'd)**
  - Demand Response
  - Access to lands for gas drilling
  - Regulatory certainty

